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ANNUAL REPORT

ON THE

HEALTH OF GIBRALTAR

FOR THE YEAR

1938

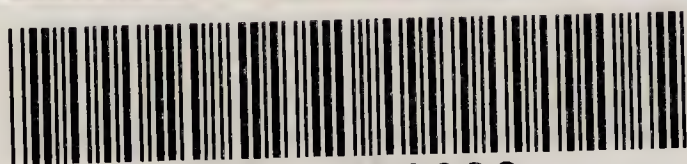
BY

**Major R. A. MANSELL, M.B.E., M.B., D.P.H., D.T.M. & H.,
Royal Army Medical Corps.
Medical Officer of Health**

**with which is included
the Report of the City Analyst and Bacteriologist,
and the Report of the Veterinary Adviser.**

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J. GARESSE, Esq.

* Allowance paid to private medical practitioners as a retaining fee for their services.

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The Deputy Director of Medical Services.

The Senior Naval Medical Officer, Gibraltar Command.

The Captain of the Port.

The Port Surgeon.

The Senior Medical Officer, Colonial Hospital.

The Medical Officer of Health.

The Chairman, City Council.

The President, Exchange Committee.

The President, Chamber of Commerce.

Secretary—H. J. S. NORTON, Esq., O.B.E.



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P R E F A C E .

My Report for the year 1938 comes into print later than usual; and for the same reason as is responsible for this—i.e., international politics and the need for civil defence—it consists, I feel, rather more of bone and less of meat than it should. The skeleton, however, is here; and, as I remarked last year, mere statistics need to be clothed with the flesh of imagination before they can be interpreted as figures of social needs, either awaiting the clothing to be provided by successful administration, or in the partially or fully clad forms of ideals nearly or wholly achieved.

Some of the statistics must obtrude themselves on the most casual notice.

The considerable increase in the size of the population, both British and alien, as recorded by the Police, is commented on in the text of the Report.

With this increased population the death rate is the lowest recorded for ten years: but in view of that increase, in spite of definite action to speed emigration, one is inclined to doubt the accuracy of the recorded population figures for the year immediately preceding.

In spite of a very high incidence of infective diseases the zymotic mortality rate was low—0.34 per 1,000 against an average of 0.63 for the preceding ten years.

The infantile mortality rate is the highest for the past ten years. It will be seen in the text of the Report that nearly one half of these infant deaths occurred during the first week of life. I pointed out last year that here, at the weakest link of the chain of life, is where we have evidence of the grossly unsatisfactory conditions under which our people are still compelled to live—and must continue to do so until the population figures are reduced to normal.

In this Report is recorded the actual beginning of the slum clearance and housing scheme; though still, in May 1939, we are without the law by which this scheme may be brought into real effect. Nevertheless a start has been made; which is more than it has been possible ever to say before.

Throughout a difficult year my task has been lightened by the ready assistance and co-operation of the Press and, too, of the whole Colony: I am very grateful for this.

The Report of the City Analyst and Bacteriologist and of the Veterinary Adviser are printed following my Report.

R. A. MANSELL,

Major, R.A.M.C.,

Medical Officer of Health.

Public Health Department,

City Council of Gibraltar,

23rd May. 1939.

CITY COUNCIL OF GIBRALTAR

PUBLIC HEALTH DEPARTMENT

SUMMARY OF VITAL STATISTICS FOR 1938.

Total area of Gibraltar Territory	... ..	{ 1,387 acres, 2 roods, 3 poles
Area of the City	... ..	{ 104 acres, 3 roods, 33 poles.
Estimated Total Civil Population of Gibraltar		20,239 persons.
Estimated Fixed Civil Population of Gibraltar		17,222 persons
Births in Fixed Civil Population	... ..	{ 199 Males. 164 Females.
Total Births	... ..	432.
Birth rate per 1,000 of Fixed Civil Population		21.07.
Deaths in Fixed Civil Population	... ..	{ 156 Males. 122 Females.
Total Deaths...	... ..	306.
Crude death rate per 1,000 of Total Civil Population...	... ..	{ 13.73.
Average crude death rate for previous ten years	... ..	{ 15.31.
Death rate from Pulmonary Tuberculosis	...	79 per 1,000.
Infantile Mortality rate	... ..	74.38 per 1,000 births.

METEOROLOGICAL OBSERVATIONS FOR THE YEAR 1938

The following paragraphs and tables have been supplied by the Air Ministry meteorologist at Gibraltar and are published by his permission.

The observations are made at the Air Ministry Meteorological Office, Windmill Hill Flats. The instrument enclosure is 393 feet above sea level and readings are taken at 01, 07, 10, 13, 18 and 22h. G.M.T. but the following tables (with a few exceptions noted below) are compiled from readings at 07, 13 and 18h. G.M.T. only. More detailed data for the station are published in the Daily and Monthly Weather Reports of the Meteorological Office, London.

Explanatory Notes on the Tables

MEAN AIR PRESSURE is expressed in millibars (1,000 millibars are equivalent to the pressure due to 29.53 inches of mercury at 32°F in Lat. 45°N). The cistern of the barometer is 400 feet above sea level, but corrections for latitude, temperature and height have been applied to the readings so as to obtain the pressure at mean sea level. The mean pressure refers to the mean of observations at 07, 13 and 18h. G.M.T.

TEMPERATURE measurements are (with the exception of the grass minimum) made in louvered screens 4 feet above the ground in the open. The maximum thermometer is set at 07h. and read at 18h; the minimum thermometers are set at 18h. and read at 07h.; the absolute extremes, however, refer to the whole periods of 24 hours.

RELATIVE HUMIDITY is derived from readings of dry and wet bulb thermometers in the screen.

CLOUD AMOUNT. The proportion of sky covered with cloud is estimated on the scale 0 to 10, the entry '0' being equivalent to cloudless sky and '10' to completely overcast sky.

RAINFALL. The rim of the raingauge is one foot above ground. Rainfall totals refer to the 24 hours beginning at 07h.

SUNSHINE. The duration of bright sunshine is measured by means of a Campbell-Stokes recorder. In calculating the percentage of possible sunshine no allowance is made for the fact that the recorder is generally insensitive when the sun is at an altitude of less than 3°.

WEATHER. The number of days of rain, snow, hail, thunder and gale are counted irrespective of the hour at which the phenomena occur. A 'gale' is a wind of force 8 or upwards on the Beaufort Scale. A day with rain is one, commencing at 07h., on which 0.2mm. (0.01 ins.) or more of precipitation

has fallen. Days with clear and overcast sky are those for which the mean cloud amount (from observations taken six times per day) are less than 2/10 or more than 8/10 respectively. Days of fog are those on which the range of visibility is less than 1000m. (1100 yards) at any of the six observational hours. Ground frost is entered when the reading of the grass minimum thermometer is 30°F or lower. Except for 'precipitation' the day is the civil day.

WIND. Wind speed and direction are recorded by a Dines Pressure Tube anemometer, the head of which is 33 feet above ground. In the table the Beaufort scale is adopted for classifying the wind force. On this scale Force 8 or above represent gales, Forces 4 to 7 moderate to strong winds, Forces 1 to 3, light breezes.

WEATHER SUMMARY FOR THE YEAR 1938

The year opened with a spell of unusually cold weather during which, on one occasion early in the morning traces of ice were observed on shallow pools. Rain fell on several days during the first half of January but after the 11th there was an absolute dry spell until 16th February, which saw the commencement of a somewhat unsettled period of about 10 days. There was a further absolute dry spell from 26th Feb. to 21st March; in fact, apart from a fall of about half an inch on 23rd Feb. the only winter precipitation for nearly two and a half months was in the form of a few scattered showers. With the coming of February squally easterly winds set in and persisted until the end of the long drought, with the exception of a few days in the previously mentioned brief unsettled period in mid-February: they set in again on March 25th and persisted until 27th April apart from short breaks on the 9th, 10th and 18th. There was a period of fine weather during the latter part of March and the first half of April, after which conditions became unsettled and showery weather lasted until mid-May bringing a rainfall of 5.76 ins. for the period, which was considerably above normal for the time of year. After 9th May the dry season commenced and but for two very slight showers in June there was no further fall of rain until 12th September. The only noteworthy feature of the summer months was the preponderance of winds from a westerly quarter over the Levanters. The winter rainy season was late in starting and the total fall up to 8th December was over eight inches below the normal for the season and over fifteen inches below the normal for the year. This deficit was made up to some extent by the copious fall in December. Easterly winds were almost entirely absent during this month.

There are one or two outstanding points on the weather of the year taken as a whole which are worthy of mention. The great excess of Levanters in the late winter and early spring occurred at a time of the year when they are normally least frequent. On the other hand the excess of westerlies over Levanters in the summer months occurred at the time of the year when the latter blow with greatest frequency. The year taken as a whole was an unusually dry one. April, May and December were the only months which did not show a deficiency in rainfall and even these months did not contribute a great deal above the average.

LAT. 36 6'N. LONG. 5 21'W.

WINDMILL HILL FLATS.

393 FEET ABOVE M.S.L.

Months	TEMPERATURE °F										REL. HUMIDITY (%)	CLOUD AMOUNT (0-10/10)			RAINFALL (mm.)		Date					
	Mean Press. at MSL	MEANS				Differential from 32° F.	HIGHEST		LOWEST			Total mm.	Max. in 24h.									
		Dry Bulb			Max. A.		Min. B.	Mean of A. and B.	Max.	Date				Min. on grass	Date							
		7h	13h	18h																		
Jan	m.b. 1023.3	51.1	56.2	54.7	57.5	49.2	53.3	-1.1	62	27,30 31	1	31	1	80	72	74	4.7	4.4	4.0	55.2	21.1	2
Feb.....	1022.2	52.2	55.5	54.2	56.6	50.8	53.7	-2.0	63	1,2	16,17	32	16	74	70	75	6.3	6.6	6.5	17.4	13.1	22
Mar	1022.8	54.5	58.0	56.1	58.9	53.4	56.1	-1.8	65	24	23	43	24	78	72	78	6.0	6.0	4.9	68.9	64.7	21
April ...	1014.7	56.4	60.0	59.0	62.2	54.7	58.5	-2.2	71	4	13	46	9,27	82	76	78	7.1	6.3	6.0	79.9	16.9	27
May ...	1016.1	59.8	65.5	64.3	68.2	57.2	62.7	-2.7	80	21	5,6	46	3	74	65	66	4.2	4.1	3.6	66.8	16.7	5
June ...	1017.0	67.4	73.5	71.6	76.1	64.3	70.2	+0.1	88	26	2,3	54	13	80	66	71	3.7	3.2	2.2	1.0	0.8	21
July ...	1016.7	68.9	74.8	73.8	78.4	66.3	72.3	-2.4	97	22	2	57	5	80	67	71	3.3	1.9	1.5	0.0	—	—
Aug.....	1014.2	69.2	75.2	72.9	78.2	66.8	72.5	-3.8	83	14	4,9,16	60	11	82	70	76	3.0	2.3	1.5	0.0	—	—
Sept ...	1016.4	64.8	71.2	69.2	74.3	63.3	68.8	-4.1	78	2,417	16	55	11,16	83	86	72	3.8	3.6	3.4	30.6	11.4	25
Oct	1017.0	62.9	68.5	65.1	70.2	61.2	65.7	-2.4	76	4,5	24	51	31	81	71	80	5.5	4.7	3.7	33.3	15.0	23
Nov.....	1020.9	59.1	64.3	61.6	65.5	57.5	61.5	+1.2	69	23	30	47	2,30	83	73	81	5.3	5.8	4.9	21.8	16.7	10
Dec ...	1015.7	52.3	56.3	55.1	58.6	50.0	54.3	-2.6	67	5	23	36	23	79	71	73	5.0	5.8	4.9	192.3	47.0	19
Year ...	1018.1	59.9	64.9	63.1	67.1	57.9	62.5	-2.0	97	July 22	Jan. 1	31	Jan. 1	80	72	75	4.8	4.6	3.9	566.9	64.7	Mar. 21

SUNSHINE			WEATHER							WIND: No. OF OBSERVATIONS OF													
Months	Daily Mean	o/o of Poss.	Rain	Snow	No. of Days of			Over-Cast Sky	Gales	Fog	Frost	8 and over	Forces			DIRECTIONS							
	(hrs)	Hail			Thun-der	Clear Sky	4 to 7						1 to 3	Calm	N	NE	E	SE	S	SW	W	NW	
Jan. ...	7'13	70'6	5	0	0	2	8	4	1	0	0	0	33	53	7	5	6	17	0	0	3	26	29
Feb. ...	5'12	47'0	6	0	0	0	5	11	3	0	0	0	64	18	2	3	6	55	0	0	3	5	10
Mar. ...	7'43	62'2	3	0	0	0	5	4	4	0	0	3	73	16	1	2	3	78	0	0	1	5	3
April ...	6'76	51'8	15	0	0	3	3	5	2	0	0	2	56	32	0	4	7	30	30	0	1	8	10
May ...	10'33	73'8	7	0	1	6	7	0	0	0	0	0	38	52	3	10	3	20	9	0	4	26	18
June ...	11'10	76'7	2	0	0	1	10	0	0	0	0	0	16	70	4	1	15	38	4	0	13	11	4
July ...	11'60	81'5	0	0	0	0	12	0	0	2	0	0	18	65	10	2	23	18	0	1	16	19	4
Aug. ...	11'13	82'7	0	0	0	0	15	0	0	0	0	0	24	64	5	5	17	12	1	4	20	25	4
Sept. ...	9'23	74'4	4	0	0	1	9	1	0	0	0	0	17	59	14	3	8	8	0	3	11	34	6
Oct. ...	7'26	64'0	5	0	0	1	7	1	0	2	0	0	36	48	9	5	26	7	0	2	9	23	12
Nov. ...	6'21	60'0	7	0	0	0	2	2	0	0	0	0	26	58	6	6	32	10	2	1	2	22	9
Dec. ...	5'39	54'7	14	0	1	1	6	3	0	0	0	0	53	40	0	2	1	2	0	1	14	62	11
Year ...	8'22	66'6	68	0	2	15	89	31	10	4	0	5	454	575	61	48	147	295	46	12	100	266	120

VITAL STATISTICS

The population actually resident in the Colony was estimated by the Police at the end of 1938 to be :—

British Subjects	17,131
Maltese	77
Residents in the Bay	14

ALIENS :—

Resident in the City	2,808
Resident in the Bay	209

Total Population ...	<u>20,239</u>
----------------------	---------------

In spite of the facts that the temporary permits of residence of many aliens have been cancelled by the Police during the year, and that many such persons are reported actually to have left the Colony, it will be seen that not only has the British population increased in comparison with the figure recorded in last year's Report, but the alien population has done so also. What is the true meaning of this latter rather astonishing fact, having in view that the immigration of aliens has been the subject of strict enquiry and scrutiny, it is not my place—nor is this the occasion—to surmise. If it were not for the fact that in the early months of 1939 (to which this Report does not properly refer) very definite action is being taken towards the evacuation of our excess—so-called “refugee” — population it would be a disquieting, but so far as I can see unanswerable, commentary that each major step hitherto taken for the reduction of these numbers has only resulted in the Police estimate of them increasing.

I have written enough in the past two years for my views at least to be known and to emphasize the potential danger which this gross overcrowding constitutes: there is nothing which I can add, nor anything which I would take away; though I still think that a very large number of citizens remain unaware of the conditions which exist not only on the outskirts of the City but also in its midst.

The fluctuations of the population during recent years have been :—

How estimated.	British Subjects Fixed Population.	Alien Subjects Floating Population.	Total Population.
Census June, 1921	16,753	1,787	18,540
Police Estimate at end of 1922	16,182	1,145	17,327
Police Estimate at end of 1923	16,165	1,181	17,346
Police Estimate at end of 1924	16,177	1,147	17,324
Police Estimate at end of 1925	16,127	1,161	17,288
Police Estimate at end of 1926	16,150	1,013	17,163
Police Estimate at end of 1927	16,120	1,076	17,196
Police Estimate at end of 1928	15,719	1,112	16,831
Police Estimate at end of 1929	15,647	1,052	16,699
Police Estimate at end of 1930	15,526	922	16,448
Census April 1931	16,188	1,425	17,613
Police Estimate at end of 1932	15,143	1,466	16,609
Police Estimate at end of 1933	15,071	1,326	16,397
Police Estimate at end of 1934	14,790	1,057	15,847
Police Estimate at end of 1935	15,735	1,130	16,865
Police Estimate at end of 1936	16,875	2,319	19,194
Police Estimate at end of 1937	16,792	2,749	19,541
Police Estimate at end of 1938	17,222	3,017	20,239

VITAL STATISTICS DURING 1938 AND PREVIOUS TEN YEARS.

Year	Population.			Deaths				Infantile Mortality.		Births.		Zymotic Mortality.	
	Fixed.	Total.	How Estimated.	Fixed population. No.	Total population. No.	Rate per 1,000 of population.		No.	Rate per 1,000 births.	No.	Birth rate per 1,000 living of Fixed population	No.	Rate per 1,000 living of Fixed population
						Fixed population.	Total population.						
1928	15719	16831	Police Estimate	286	293	18.19	17.40	45	122.9	366	23.2	30	1.7
1929	15647	16699		254	262	16.36	15.68	18	46.6	388	24.7	10	.63
1930	15526	16448		240	240	15.6	14.5	25	71.3	349	22.4	8	.51
1931	16188	17613	Census	250	254	15.4	14.4	23	61.0	377	23.28	4	.24
1932	15143	16609	Police Estimate	245	259	16.17	15.59	21	60.69	346	22.84	16	.96
1933	15071	16397		241	245	15.99	14.94	14	39.2	357	23.68	3	.18
1934	14790	15847		225	230	15.21	14.51	21	54.8	383	25.8	6	.37
1935	15735	16865	**	255	265	16.20	15.71	18	67.4	267	16.9	6	.35
1936	15735	16865		249	261	15.82	15.47	19	62.09	304	19.30	13	.77
1937	16792	19541		256	292	15.24	14.93	26	68.24	381	22.69	10	.51
1938	17222	20239	Police Estimate	246	278	14.28	13.74	27	74.38	363	21.07	6	.34

**Normally resident population.

DEATHS.

The resident British population provided 246 deaths—a rate of 14.28 per 1,000; and there were 32 amongst resident aliens—10.6 per 1,000: the total civil death rate per 1,000 was 13.73.

The principal causes of death, in order, were :—

- (1) Heart diseases 38 cases
- (2) Other (unclassified) diseases 41 „
- (3) Cancer and Malignant tumours..... 29 „
- (4) Haemorrhage, apoplexy and soften-
ing of the brain 25 „
- (5) Pneumonia 30 „

The crude death rate over the past ten years has been :—

Year	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
Fixed Population	16.36	15.60	15.40	16.17	15.99	15.21	16.20	15.82	15.24	14.28
Total Population	15.63	14.50	14.40	15.59	14.94	14.51	15.71	15.47	14.93	13.73

The numbers of deaths in each month and quarter of the year was as follows :—

January	31	April	27	July	18	October	22
February	38	May	23	August	18	Nov.	18
March	27	June	22	Sept.	12	Dec.	22
	—		—		—		—
	96		72		48		62
	—		—		—		—

Causes of deaths in 1938 in Civil population, according to the International Abbreviated List with Age and Sex incidence.

Cause of Death.		All Ages	Under 1 year.		1 year and under 2.		2 years and under 5.		5 years and under 15		15 years and under 25.		25 years and under 45		45 years and under 55		55 years and under 65.		65 years and over	
			M F		M F		M F		M F		M F		M F		M F		M F		M F	
			M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
1	Enteric Fever ...	1	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
8	Diphtheria ...	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9	Influenza ...	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
12	Other epidemic diseases ...	3	1	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—
13	Tuberculosis of resp. system ...	6	—	—	—	—	—	—	1	—	2	1	2	2	3	2	1	—	2	—
14	Tuberculosis of nervous system	2	—	—	—	—	—	—	—	—	1	—	—	1	—	—	—	—	—	—
15	Other tuberculous diseases	2	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—
16	Cancer, Malignant tumours...	29	—	—	—	—	—	—	—	—	—	—	1	3	4	2	3	2	5	9
17	Meningitis ...	2	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1
18	Haemorrhage, apoplexy, and softening of brain ...	25	—	—	—	—	—	—	—	—	—	—	2	—	2	2	2	1	5	11
19	Heart diseases	38	1	—	—	—	—	—	—	—	—	—	4	1	4	2	4	3	7	12
20	Acute bronchitis	3	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1	—	—	1
21	Chronic bronch.	12	—	—	—	—	—	—	—	—	1	—	—	—	1	1	2	1	5	1
22	Pneumonia ...	30	4	4	5	3	—	—	—	—	1	1	3	—	—	1	2	2	2	2
23	Other diseases of the respiratory system ...	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	1	—	1
24	Diseases of the stomach ...	6	—	—	—	—	—	—	—	—	—	—	—	—	3	—	1	—	2	—
25	Diarrhoea and Enteritis ...	4	3	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
26	Appendicitis and typhlitis ...	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—
27	Hernia, intestinal obstruction	3	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	—	—	1
28	Cirrhosis of liver	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—
29	Acute and chronic nephritis...	16	—	—	—	—	—	—	—	—	—	—	2	—	2	—	6	—	4	2
30	Diseases of female genital organs	1	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—
32	Other diseases of pregnancy and parturition ...	2	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—
33	Congenital debility and malformations ...	10	7	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
34	Old Age...	15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5	10
35	Violent deaths (suicide excluded)	6	1	—	—	—	—	—	—	—	—	—	2	—	—	—	1	—	1	1
37	Other diseases...	41	1	1	1	—	—	—	1	—	1	—	2	2	1	5	6	3	10	7
38	Diseases not stated or ill-defined ...	3	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	1
Totals...		278	18	9	6	5	1	1	3	—	6	4	19	12	21	16	31	14	51	61

BIRTHS AND INFANTILE MORTALITY.

The fixed population provided 363 births during the year—199 males and 164 females; giving a birth rate of 21.07 per 1,000.

Twenty-seven infants died under the age of one year: the causes of death are shewn in the table below. The infantile mortality rate per 1,000 live births was, thus, 74.38.

CAUSES OF INFANT DEATHS.

Cause of Death.	Under 1 week.	1 week and under 2.	2 weeks and under 3.	3 weeks and under 4.	Total under 4 weeks.	1 month and under 3.	3 months and under 6.	6 months and under 9.	9 months and under 12.	Total under 1 year.
Pneumonia	—	—	—	—	—	1	2	2	3	8
Congenital Debility and Malformations	10	—	—	—	10	—	1	—	—	11
Cerebro spinal Meningitis	—	—	—	—	—	—	1	—	—	1
Diarrhoea and Enteritis	—	—	—	1	1	1	—	1	1	4
Other Causes	1	—	—	—	1	—	—	1	1	3
Totals	11	—	—	1	12	2	4	4	5	27

Reference to the Table on page 9 shews that this rate is the highest recorded for ten years.

“Public Health” can help infants of this age by improving their environments, by advice to their parents, and by assistance with their feeding. The records of the Council’s Welfare Centre, on page 13, shew what is being done under the two latter headings—a considerable and increasing amount. The records of the Council’s cleansing services, under the City Engineer, and of the other allied public health services detailed in this Report shew no diminution of activity. Failure may, therefore, reasonably be ascribed to deterioration under the first heading of factors over which the Council have no control. No community so grossly and insanitarily overcrowded as this is can pretend to protect its infant life; or indeed to be doing other than severely handicapping the parents of young families no less than the young themselves.

MATERNITY SERVICES.

Two-hundred and seventy-six women were admitted to the Maternity Ward of the Colonial Hospital; of these 203 were from the resident population, 73 were non-residents.

One hundred and eighty-eight live births were recorded in respect of the admissions of residents and 62 in respect of non-residents. The former figure represents 51.7 per cent of the total births proper to the class concerned.

Registered midwives attended 136 live births—i.e.: 37.4 per cent of the total. The high reputation of these midwives was maintained by the absence of puerperal pyrexia or sepsis for the seventh successive year.

Thirteen cases were provided with free attention by the midwife engaged by the Council from funds provided for this purpose by the Colonial Government.

CHILD WELFARE.

The average attendance at the Welfare Centre was (as last year) 103. The equivalent of approximately 18,256 pints of milk, in condensed and powdered form, was issued for these infants. This issue, by the kindness of the importing firms who supply them, is able to be made at rates much below wholesale prices, and in indigent cases free. The infinitesimal profit made by the Centre enables it to maintain itself for over a quarter of the year, when the Government grant has been exhausted, and also to make a substantial Christmas present of milk to each regularly attending member. The quantity of milk distributed this year has considerably exceeded all previous records: it will be seen that it amounts to practically half a pint of milk per child daily throughout a year.

That the attendance at the Centre has remained in 1938 at the same figure as in 1937 I take to indicate that it now reaches all who are entitled to, and desirous of accepting, its assistance. If this is so, it is a very satisfactory state of affairs. The Centre is however, capable financially of assisting even larger numbers should the demand be made.

The nurse who attends at the Centre made 434 visits to the homes of members during the year.

School medical inspection is the duty of the staff of the Colonial Hospital; it being thus a Government service outside the control of the City Council I am not in a position to make any comments on the health of children of school age.

PREVALENCE AND CONTROL OF INFECTIVE DISEASE

The total number of cases of notifiable infective diseases reported in 1938 was 856—more than twice as many as in the preceeding year (419). In 1935, 241 cases were reported and in 1936, 177.

The epidemic of measles which started at the end of 1937 continued into 1938 and provided during the whole of this latter year 508 cases. The actual epidemic—1937/38—amounted to some 560 reported cases.

For over the past hundred years, since the City ceased to be afflicted by yellow fever and apart from the pandemic influenza which immediately followed the Great War, we have become accustomed here more and more to mild types of infective disease with low mortalities. Though thus the fear of death and disablement, so often associated with these infections in other countries, has been lessened or prevented to a large extent, the private and public bill in cash, and in anxiety, for 850 sick persons—the majority of them, children in their most vulnerable years of life (see the table on page 16)—is a matter which is worthy of just as serious consideration as would be a raised mortality rate. I would emphasize what I wrote last year; that such a bill of ill-health, paid mostly by those in the poorer states and in the most overcrowded conditions, and usually directly associated with these latter, cannot be measured by the simple figures which record it. Strain follows anxiety; expense marches with illness and progresses into convalescence; so that the mental and physical recovery time of the afflicted family as a whole must be delayed long beyond what it should be—and undoubtedly is—amongst those whose incomes and houses are more capable of bearing the strain put upon them. Overcrowding, disease and distress must march hand in hand; there is no known means of alleviating or abating the latter two whilst the first remains present.

The following figures shew the principal infective diseases reported in 1938 in comparison with the two preceeding years:

	1936	1937	1938
Diphtheria	44	34	15
Enteric	17	12	28
Fifth Disease	—	12	114
Measles	24	164	508
Rubella	1	113	50
Scarlet fever	31	10	20
Tuberculosis (pulmonary)	30	34	8

QUARTERLY INCIDENCE OF NOTIFIABLE INFECTIOUS DISEASES
CIVIL POPULATION.

Disease	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total	Deaths.
Measles	464	42	1	1	508	—
Diphtheria	4	2	1	8	15	1
5th Disease.....	110	4	—	—	114	—
Cerebro-spinal Meningitis ..	1	—	—	—	1	1
Chicken Pox	65	33	4	—	102	—
Enteric Fever	5	4	8	11	28	1
Scarlet Fever	5	1	3	11	20	—
Undulant Fever	1	1	1	3	6	—
Rubella	41	8	1	—	50	—
Pulmonary Tuberculosis ..	2	3	—	3	8	16
Poliomyelitis.....	—	—	2	1	3	2
Dysentery.....	—	—	—	1	1	—
Totals.....	698	98	21	39	856	21

CASES LANDED FROM THE BAY OR BROUGHT INTO
THE TOWN FOR TREATMENT.

Disease	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total	Deaths
Enteric Fever	1	—	—	3	4	1
Scarlet Fever.....	1	1	—	—	2	—
Pulmonary Tuberculosis ..	2	3	1	2	8	1
Chicken Pox.....	—	1	—	—	1	—
Diphtheria	—	—	1	—	1	—
Cerebro-spinal Meningitis	—	—	1	—	1	—
Dysentery	—	—	1	—	1	—
Small Pox....	—	—	—	1	1	—
Totals	4	5	4	6	19	2

Age and Sex incidence of Notifiable Infectious Diseases amongst Civil Population during 1938.

Notifiable Disease.	NUMBER OF CASES NOTIFIED.														Districts.			Total cases re- moved to Hospital.		
	At all Ages	Under 1.		1 and under 5.		5 and under 15.		15 and under 25.		25 and under 45.		45 and under 65.		65 and Over.		North.	Central.	South.	Residents.	Non- Residents.
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.					
Measles	508	14	7	119	93	115	125	15	14	2	4	—	—	—	—	32	414	62	14	—
5th Disease	114	1	—	13	16	40	33	6	4	1	—	—	—	—	—	3	100	11	—	—
Cerebro-spinal Meningitis	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—
Chicken Pox	102	—	—	9	21	25	38	1	4	2	2	—	—	—	—	2	94	6	1	1
Enteric Fever	28	—	—	1	—	4	6	3	1	3	7	—	—	—	—	1	23	4	15	4
Diphtheria	15	—	—	6	5	1	3	—	—	—	—	—	—	—	—	1	8	6	10	1
Undulant Fever	6	—	—	—	—	1	—	2	1	—	2	—	—	—	—	—	6	—	1	—
Rubella	50	—	1	7	1	12	16	6	3	1	1	1	1	—	—	—	41	9	1	1
Scarlet Fever	20	—	—	2	1	3	9	3	2	—	—	—	—	—	—	—	20	—	—	—
Pulmonary Tuberculosis	8	—	—	—	—	1	1	1	—	1	1	—	—	—	—	—	6	2	3	8
Poliomyelitis	3	—	—	1	1	1	—	—	—	—	—	—	—	—	—	—	2	1	3	—
Dysentery	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	1
Totals	856	16	8	159	138	203	231	37	29	10	17	3	5	—	—	39	715	102	50	18

Monthly Notifications of Notifiable Infectious Diseases during 1938. --Civil Population.

Months.	DISEASES.																							
	Measles		Diphtheria		5th Disease		Cerebro-spinal Meningitis		Chicken Pox		Enteric Fever		Scarlet Fever		Undulant Fever		Rubella		Pulmonary Tuberculosis		Polio-myelitis		Dysentery	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
January	246	—	2	—	61	—	1	—	21	—	1	—	2	—	1	—	13	—	1	—	—	—	—	—
February	169	—	2	—	30	—	—	—	25	—	1	—	2	—	—	—	14	—	—	—	—	—	—	—
March	49	—	—	—	19	—	—	—	19	—	3	—	1	—	—	—	14	—	—	—	—	—	—	—
April	26	—	—	—	4	—	—	—	14	—	—	—	1	—	—	—	5	—	1	—	—	—	—	—
May	13	—	2	—	—	—	—	—	11	—	4	—	—	—	—	—	3	—	1	—	—	—	—	—
June	3	—	—	—	—	—	—	—	8	—	—	—	—	—	1	—	—	—	1	—	—	—	—	—
July	—	—	—	—	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
August	—	—	1	—	—	—	—	—	1	—	2	—	1	—	—	—	1	—	—	—	1	—	—	—
September	1	—	—	—	—	—	—	—	—	—	6	—	1	—	—	—	—	—	—	—	—	—	—	—
October	1	—	3	—	—	—	—	—	—	—	5	1	—	—	2	—	—	—	1	—	—	—	—	—
November	—	—	1	1	—	—	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—
December	—	—	4	—	—	—	—	—	—	—	3	—	—	—	1	—	—	—	2	—	—	—	—	—
Totals .	508	—	15	1	114	—	1	1	102	—	28	1	20	—	6	—	50	—	8	16	3	2	—	1

MEASLES.

Than what has already been said there is nothing more to write, save that it is to be hoped that an epidemic of the size of the 1937/38 one will leave the City free of the probability of another outbreak for at least a couple of years—by which time one hopes that the overcrowding, which gave this epidemic such a free run, will have largely been mitigated.

FIFTH DISEASE.

I commented specially on this mild, but definite, infective disease last year. Between January and April 114 cases were reported, over half of them in January.

CHICKEN POX.

One hundred and two cases were reported during the year; the majority during the first four months.

DIPHTHERIA.

Fifteen cases, with one death, in 1938 is a satisfactory record compared with 34 and 44 in the two years preceeding. Eight of these cases, and the one death, occurred in the last quarter of the year.

During the year the Council approved the issue of anti-diphtheritic serum free of charge in all cases in which a doctor requires its use: no fear of expense can thus trouble a parent whose child may acquire this infection.

PULMONARY TUBERCULOSIS.

Eight cases only were notified during the year, providing a notification rate of 0.39 per 1,000—the lowest recorded in recent history: of these cases 5 were under 35 years of age. Sixteen deaths were recorded—a rate of 0.79 per 1,000. Of these deaths 4 occurred within twelve months of the date of original notification, and 7 were recorded in the death certificate only.

I prefer not to make any comment on these figures at all as I feel that the situation as a whole in relation to this disease is still hovering between a deeply ingrained dread of the actual diagnosis and the confidence and progress which the Tuberculosis Officer is undoubtedly gaining with those patients who go themselves, or are sent by practitioners, for his specialist advice and treatment.

During the year Dr. A. McK. Fleming of the Colonial Hospital staff has been appointed adviser to the Council on tuberculosis, in line with policy and practice in England, and

his consultations with me have been most helpful: a very satisfactory liaison exists on a regularised footing for the assistance especially of sufferers from this disease among the poorer classes of the population. Certain amendments to the Rules under the Public Health Ordinance have been made to enable this very necessary reform; and whilst I think that these may have caused a certain amount of unvoiced suspicion amongst some classes, I feel sure that, as time shews that these alterations have been only to the letter of the law and not to the spirit of its practice, considerable benefits will result to the whole of those concerned.

UNDULANT FEVER.

Six cases were notified during the year. Two of these were isolated cases for whose infection outside sources could reasonably be blamed. Four occurred in members of the same family. The original case of these four was diagnosed in the Colonial Hospital on the 27th June: he discharged himself before completion of treatment on the 19th July. Meanwhile another member of the family took ill on the 15th July and was diagnosed on the 29th. This family consumed sterilised goats' milk from a regular vendor whose supplies are derived from Spain and are consequently required by law to be boiled or sterilised before sale; special and routine sampling of these supplies when delivered or ready for delivery did not shew any failure of the vendor to comply with this requirement at any time during the year. Nor did routine or special examinations of the goats supplying milk in Gibraltar reveal any infected animals. The two cases referred to above continued to be treated in their home, which was a good one and not overcrowded. Two further cases were reported in the same family on the 5th October, with onset nine or ten days previously. Up to the date of writing (March, 1939) no further case has occurred in this family. No neighbours were affected, nor any other persons receiving milk, admittedly, from the same supply: nor indeed, have any other cases been reported which might suggest a local source of this infection or any general imported one.

ENTERIC FEVERS.

This group of fevers produced twenty eight cases during the year in comparison with twelve in 1937 and 17 in 1936. A considerable proportion of these were in small groups of associated cases of which the most that can be said is that, though the passage of the infection could be reasonably surmised through each small series, its real origin was not isolated

in any; though strong suspicion was levelled at certain individuals as carriers of the infection and one probable, though not proved, "carrier"—a refugee—was actually removed from the community. Three such groups of typhoid fever occurred at different times of the year involving eight cases.

A small outbreak of paratyphoid B infection occurred in a hotel in September/October involving five reported cases and giving cause for considerable anxiety. As in the typhoid cases noted above extensive search for possible carriers of infection, or mild cases insufficiently ill to call in the services of a doctor, was carried out, involving a very large number of laboratory examinations. In this group four persons other than the patients shewed evidence, during the course of these investigations, of recent infection with this disease. No evidence of any person being a "carrier" of the infection was discovered, and there were no secondary cases. I was satisfied, after detailed examination, that these four persons had actually suffered from the disease in a very mild form and that none of them was in reality the origin of the infection which, I think, was imported in foodstuffs obtained by the hotel direct from its own farm in Spain. Their early detection, which was commenced by my deputy shortly before my return from leave, and their removal from any possibly dangerous contact with the remainder of the population both of the hotel (in which the management gave most helpful co-operation) and of the City assisted in the prevention of the spread of this outbreak.

The twenty-eight reported cases should thus, I think, be increased to thirty-two—possibly thirty-three—known individual infections. In any case twenty-eight is the highest figure recorded in the past twenty years under this heading.

VENEREAL DISEASE.

Fifty-one cases, of whom 37 were merchant seamen, were treated at the Colonial Hospital. Diagnosed infections are recorded in the report of the City Analyst and Bacteriologist.

VACCINATION.

Four hundred and three primary and 350 re-vaccinations were performed during the year: of the latter 278 were on children attaining the age of twelve years. The Public Vaccinator carried out 348 and 323 of these cases respectively.

RABIES.

Two cases of canine rabies were diagnosed during the year. One of these dogs was the property of a soldier and had never been in the streets, having spent the whole of its life in the

lower level of Jumper's Bastion Barracks. Enquiries revealed the fact that some months previously another dog kept in these Barracks had died of what was presumed to have been poisoning. These were the only dogs in these Barracks.

The second case was a stray dog picked up in the City and immediately isolated. This dog was not known and was presumed to have entered the Colony from Spain through the boundary fence.

In both cases the diagnosis was confirmed by the Director of the Pasteur Institute of Morocco to whom I am indebted for his help and advice.

RELIEF OF THE DESTITUTE AND AGED SICK

OUTDOOR RELIEF.

The average number of person in receipt of outdoor relief throughout the year during the past five years has been :—

1934	106
1935	131
1936	131
1937	118
1938	107

There is no need to repeat or to emphasize the remarks which I made under this heading last year, but I would again commend them to the attention of any who are interested in the well-being of the working classes—and who still have a copy of that Report.

The statement of accounts relating to this work are at the end of the following section.

INDOOR RELIEF.

The average number of inmates of the "Home" was 41 males and 17 females.

The average costs of feeding and maintenance are shewn below.

I remarked at some length again last year on the site and structure of the "Home" as a whole, on the urgent necessity for essential repairs, and on the probability of an adverse financial balance at the end of 1938. The accounts which follow shew that the limited fund provided by Government for both indoor and outdoor relief for the whole Colony has been over-spent by some £500. That debt is more than completely accounted for by repairs to the old and, generally speaking, unsuitable buildings which form the "Home," and includes the cost of a new roof to one of the two houses.

SUMMARY OF INDOOR AND OUTDOOR EXPENDITURE FOR THE YEAR 1938

INDOOR RELIEF—

Provisions	£1,094	4	0
*Miscellaneous	418	10	11
Maintenance of Buildings	140	6	11
Repairs to Buildings	467	8	0
Rent	312	0	0
Clothing and Equipment	109	8	4
Light	52	13	10
Water	77	19	0
Funeral Expenses.....	7	10	0
Hire of Telephone	12	0	0
Insurance	1	10	0
Printing	1	7	0
			£2,694 18 0
Days of subsistence	21,170		
Average No. of inmates	58		
Cost of feeding per head per day	1/0 $\frac{1}{4}$ d.		
Cost of feeding per head per year	£18 17 3 $\frac{1}{4}$ d.		
Total all-in cost per head per day	2/6 $\frac{1}{2}$ d.		
Total all-incost per head per year	£46 9 3 $\frac{1}{4}$ d.		

OUTDOOR RELIEF—

Meat (12,695 lbs.)	£317	7	6
Milk, fresh (6,481 pts.)	81	12	11
Milk, condensed (7,920 tins)	136	3	0
Milk, evaporated (1,392 tins)	20	13	3
Money Grants	190	5	0
Printing	4	0	0
			£750 1 8
Salaries	385	0	0
Total expenditure on Indoor and Outdoor Relief	£3,829	19	8

*Includes washing, cleaning, cooking, coal, charcoal, boat repairs, utensils, ice, medicines, tobacco for inmates etc.

INVESTIGATION AND PREVENTION OF OTHER DISEASES

Considerable anxiety was occasioned in the early part of the year by the epidemic of typhus which commenced in French Morocco in the previous autumn and had, early in 1938, spread towards the coast. The possibility of the carriage of infection in vessels calling at this port from that country was considered to be a very real one and quarantine measures were put into force until reports shewed that the epidemic had completely ceased.

Records of the routine anti-mosquito and rat campaigns are contained in the Tables which follow.

MOSQUITO CAMPAIGN RETURN FOR 1938

[illegible]

Others include—Buckets, pits, gullies, under-ground tanks, flower-pots, catch-pits, storm-water drains, pumps, drinking troughs, jugs, old tins, grinding stones, concrete tanks and open channels.

SUMMARY

Tubs	...	...	...	...	...	50
Barrels	...	...	...	...	...	15
Earthenware Vessels	...	...	...	...	...	33
Others	...	...	...	...	...	227
Total	...	...	...	...	...	355

Rats destroyed during 1938, by Districts
(not including H.M. Dockyard).

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Total
Town District	290	275	302	293	306	316	393	362	389	361	367	340	3,991
South ,, ...	273	250	237	270	263	285	260	305	267	271	264	283	3,278
North ,, ...	83	67	85	87	68	88	91	87	88	101	79	103	1,027
Sheds and Warehouses Waterport Wharf and Commercial Mole	22	23	32	13	26	14	45	33	47	29	28	15	327
Total.....	668	615	706	663	663	703	789	787	791	762	738	741	8,626

Rats examined at City Laboratories during 1938.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Total
Non-Infected	12	4	15	11	11	9	11	14	11	9	6	5	118
Infected	—	—	—	—	—	—	—	—	—	—	—	—	Nil

Number of poisoned baits laid by Rat Catchers during 1938.

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Total
3,146	3,010	3,480	3,408	3,011	2,978	3,529	3,329	3,319	3,863	3,390	3,222	39,715

Total number of Rats destroyed during 1938.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Total
Civil and Colonial Property } Trapped ...	667	614	702	649	659	695	787	784	789	762	738	741	8,587
} Poisoned...	1	1	4	14	4	8	2	3	2	0	0	0	39
H.M. } Trapped ...	137	136	146	109	128	134	142	146	143	148	164	161	1,694
Dockyard } Poisoned...	10	7	4	15	12	11	19	17	14	12	6	15	142
Total.....	815	758	856	787	803	848	950	950	948	922	908	917	10,462

MEDICAL WORK FOR THE COUNCIL

The following numbers of men have been examined prior to their employment by the Council.—

January	2
February	1
March	11
April	4
May	46
June	23
July	8
August	3
September	7
October	2
November	—
December	11
Total	118

SERA AND VACCINES

Stocks of the following sera and vaccines are maintained :—

Anti-Streptococcus Serum
 Anti-Anthrax Serum
 Anti-Meningococcus Serum
 Anti-Dysentery Serum
 Diphtheria Antitoxin
 Tetanus Antitoxin
 Scarlet Fever Streptococcus Antitoxin
 Staphylococcus Vaccine
 Anti-Rabic Vaccine
 Calf Lymph
 Tuberculin (veterinary uses).

DISINFECTION.

The following numbers of articles were dealt with at the Council's Disinfecting Station during the year :—

Month	Beds and Mattresses.	Bolsters and Pillows	Blankets and Quilts.	Sheets.	Sundries.	Totals.
January	210	321	321	267	164	1,283
February	317	529	471	454	330	2,101
March	207	352	291	357	120	1,327
April ..	77	128	126	69	55	455
May	85	95	112	69	223	584
June	52	47	32	43	29	203
July	22	14	7	14	18	75
August	29	16	14	16	52	127
September	60	21	23	22	122	248
October ...	32	17	12	15	43	119
November	62	61	42	41	92	298
December ..	43	55	59	59	60	276
Totals	1,196	1,656	1,510	1,426	1,308	7,096

Six hundred and seventy-one premises were disinfected on account of the occurrence therein of cases of infective disease or for the destruction of vermin.

The number of disinfections carried out in stables, amounted to 450.

AMBULANCE SERVICE

The Council now provide a continuous day and night service which includes the removal of street accident cases, cases for operation, etc., in addition to the conveyance of cases of an infective nature.

The number of cases conveyed during the year was as follows:—

	Local cases.	Bay cases.
Pneumonia	—	4
Diphtheria	5	—
Enteric Fever	13	1
Appendicitis	4	7
Malaria	—	2
Tuberculosis	3	1
Erysipelas	1	—
Injuries	51	15
Pleurisy	2	—
Influenza	1	—
Chicken Pox	—	1
Measles	2	—
Cerebro-spinal Meningitis	1	1
Scarlet Fever	—	1
Tetanus	1	—
Encephalitis	—	1
Modified Variola	—	1
Dead bodies	6	—
Miscellaneous	116	26
Totals	206	61

SANITARY CIRCUMSTANCES OF THE DISTRICT

I am indebted to the City and Water Engineer, Mr. W. H. Pearce, O.B.E., M.C., M.Inst.C.E., F.S.I., etc., for assistance in the preparation of this section of the report.

WATER SUPPLY.

Rainfall=24.22 inches being the average of a number of Council's rain gauges situated at different levels. Highest intensities registered during the year were on 22nd March .40" in 5 minutes=rate of 4.80" per hour, and on the 20th April .28" in 10 minutes=rate of 1.68" per hour.

The total quantity collected from rain water catchments during the year 1938 was 12,960,111 gallons.

To the Shipping (including the Admiralty)=	8,977,105 gallons
To the Town, etc.	=22,292,423 gallons

Total Supply ...	<u>31,269,528 gallons</u>
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The total supply during 1938 thus exceeded that of 1937 by nearly six and a half million gallons; almost the whole of this excess was consumed in the City, the supply to shipping being only half a million gallons more than in the preceding year.

In years of short rainfall such as this, and with the figures actually in front of one, it is possible fully to appreciate the value of the wells at North Front which were opened up by the City Engineer in recent years.

Pumped from North Front Wells.

Pumped into Reservoirs	=13,443,544 gallons
Supplied direct to other consumers...	= 240,000 gallons

Total	<u>13,683,544</u>
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Reservoir No. 9 (1,000,000 gallons nominal) was finished and brought into use and a new reservoir No. 10 (two million gallons nominal) was commenced.

During the whole of the summer work proceeded with the entire renewal of the eastern rain water catchment areas of about 24 acres extent.

A new pumping main was laid up the cliffs to high level reservoirs.

BRACKISH WATER.

Total quantity pumped during the year—320,600,000 gallons, (292,135,900 in 1937 and 271,651,400 in 1936).

SEWERAGE AND DRAINAGE.

Sewage and storm water pumped from low level during the year (exclusive of gravitation system)=73,116,616 gallons.

REFUSE COLLECTION AND DISPOSAL.

The average daily disposal of domestic refuse at Refuse Destructor was about 16 tons.

A quantity of house refuse and street sweepings is also disposed of by tipping at Europa.

During the year all stable manure has been collected and disposed of. The top of the Destructor chimney was reconstructed.

HOUSING.

In advance of the passing into law of a Housing Ordinance the Council have commenced a block of tenements on the site of the old Cumberland Battery and it is expected that this will be ready for occupation by July 1939; by which time also it is hoped that draft Ordinance will have passed into the Statute books. Combined with this delay in the enactment of the law there has, of course, been some unavoidable slowing down of actual construction and the preparation of the next stage of the scheme by the sudden diversion of thought and labour towards the requirements of civil defence in the last quarter of the year.

Plans and schemes were prepared for tenement houses at Calpe Terrace, Flat Bastion Road, Shorthorn Dairy Farm but are in abeyance.

The construction of two officer's residence at Red Sands Road was commenced.

BATHS.

A scheme was commenced for the remodelling of Irish Town Baths but suspended owing to pressure of other work.

PUBLIC HEALTH DEPARTMENT.

Plans were prepared for constructing new offices on the site of the old Fire Station (vacated as the result of the rehousing of the Fire Brigade in their new building), and it is hoped that these may come into being shortly so as properly to accommodate a very overcrowded Department and permit expansion of other offices, also overcrowded, in the City Hall.

PUBLIC HIGHWAYS.

The principal improvement effected was the construction of a reinforced concrete viaduct and road widening at King's Bastion.

AIR RAID PRECAUTIONS.

A large amount of plan work and estimating was done but the constructional works were only approved and started in the last month of the year 1938.

The biggest individual item was the Rosia Sea Water Pumping Scheme and town's mains extension for fire fighting purposes.

SUMMARY OF WORK DONE BY SANITARY INSPECTORS DURING 1938

Complaints received	267
Premises inspected :	
Number of Statutory Notices served	5
Number of Informal Notices served	168
Nuisances found :	
Minor defects in drains	119
Obstructed drains	301
Minor defects in water closets	264
Defective water closet fittings	340
Defective water fittings	255
Defective rainwater pipes	60
Defective eavesgutters	79
Defective roofs	54
Defective yard paving	42
Dampness	32
Premises dirty	141
Defective or no dustbin	225
Other minor defects	1123
Suspected pollution of water in underground tanks...	17
Underground tank not insect proof	5
Brackish water tank not insect proof or no cover	17
Brackish water running to waste	175
Miscellaneous Services :	
Samples of Food and Drugs taken for analysis	85
Premises disinfected for infectious disease	671
Premises disinfected for vermin, etc.	5
Stables disinfected	450

Articles disinfected at North Front Disinfecting Station	
Visits of enquiry re Infectious Disease	784
Visits paid to milk shops	256
Visits paid to eating houses	282
Visits paid to mineral water factories	251
Visits paid to common lodging houses	49
Visits paid to premises on which notice for abatement of nuisance has been served and are revisited for the purpose of ascertaining if requirements have been complied with	1676
Cases removed in Ambulance :	
Local	206
Bay, etc.	61
Vaccination notices served	494
Legal proceedings instituted	9
Foodstuffs, etc., condemned as unsound lbs.	85
Street water fittings found defective	41

COMMON LODGING HOUSES

The only Common Lodging House at present existing in Gibraltar was visited at intervals and in no instance was an infringement of the Bye Laws noted. No cases of disease of an infective nature occurred in it during the year.

FOOD

The following articles were destroyed as unsound at the request of their owners :—

Frozen Beef.....	1,833 lbs.
Frozen Mutton	378 lbs.
Sausage	74 lbs.
Liver, Kidney, etc.	58 lbs.
Potatoes	129 bags.
Octopus (dried)	998 cases.
Tinned Meat	33 tins.
Cheese	38 lbs.
Salame (sausage)	1,600 kilos.
Condensed Milk.....	2,549 tins.
Tinned Ham	2 tins.

No legal action has been required in respect of unsound food except in the case of milk. Again this year the proportion of samples found not to comply with legal requirements, and to shew evidence of definite, and even marked, adulteration, is unduly high. Full details are recorded in the Report of the City Analyst, which follows.

MARKETS AND SLAUGHTERHOUSE.

Additional stall accommodation has been provided in the fruit and vegetables market together with several minor structural improvements.

Considerable reconstructions have been carried out at the slaughterhouse resulting in a marked improvement of working conditions and the provision of greater facilities for the easy and rapid inspection of carcasses. The installation of rustless steel fittings has been commenced and should be completed in 1939 in replacement of the old rusted steel and iron which had become not only impossible to keep properly clean but also in many instances dangerous to the men working there.

Other condemnations of locally slaughtered animals were :

Cattle :—

	In whole.	In part.
Cysticercus Bovis	16	66
Tuberculosis	11	10
Pyæmia	2	—
Umbilical Infection.....	—	1
Emaciation	2	—
Pericarditis (septic)	1	—
Pericarditis (localised)	—	2
Discolouration of fat	—	1
Bruising	—	1
Fever	1	—

Sheep :—

Emaciation	5	—
Bronchopneumonia (septic)	1	—
Lobar Pneumonia (septic) ..	1	—

Pigs :—

Tuberculosis	4	21
Bruising	1	5
Dermatitis (due to parasitic infestation)	1	7
Abscesses (multiple and generalized)	3	—
Xanthosis	2	—
Discolouration of fat	—	1

PIGS; *continued* :—

	In whole.	In part.
Urticaria	—	2
Pneumonia (septic)	1	—
Erysipelas (acute)	1	—
“Pimply Gut”	—	1
Peritonitis (septic)	1	—

Foot and Mouth Disease :—

This disease was diagnosed in cattle which arrived from Morocco on the 18.2.38, and the outbreak continued in cattle arriving from Morocco until August.

The following parts of carcasses were condemned :—

134 Heads. 134 Paunches. 536 Feet.

Eight pigs’ feet and two pigs’ paunches were also condemned due to shewing lesions of Foot and Mouth Disease.

Number of Animals Slaughtered :—

	1934	1935	1936	1937	1938
Cattle	1512	1446	1926	2106	2269
Sheep	1287	1154	1121	813	1022
Pigs	759	676	746	557	697

Imports of Frozen Meat (in pounds) :—

	Beef	Mutton	Pork
1934	436,666	181,839	92,261
1935	678,264	178,761	128,564
1936	996,799	207,791	138,923
1937	1,101,228	231,866	261,823
1938	999,715	223,907	172,201

The total quantity of Frozen Meat, including edible offal, imported during 1938 was 1,521,489 lbs.

AMOUNT OF SHIPPING ENTERING THE PORT OF GIBRALTAR DURING THE YEAR 1938

Vessels entered	4,752
Net tonnage	13,772,321
Inspected by P.M.O.	17
Left in Quarantine	18
Admitted	12

REPORT OF THE CITY ANALYST AND BACTERIOLOGIST FOR THE YEAR 1938

I have pleasure in submitting my nineteenth annual report. It represents the work carried out in the laboratories of The Public Health Department for the year 1938. The total number of pathological specimens and samples of all classes examined and reported on was 5,776, this being an increase of 432 over the previous years' figure. The activities of the laboratories have been maintained and comprise pathological specimens from (1) Colonial Hospital; (2) Military Hospital and Veterinary department; (3) Royal Navy; (4) Medical practitioners of Gibraltar; Public Health specimens (including samples taken under "Food and Drugs (adulteration) Ordinance"; miscellaneous samples from departments of City Council and general public; toxicological and forensic examinations for H.M. Coroner and police; also the testing of oil carrying tankers for inflammable gas.

Pathological specimens received from Colonial Hospital continue to increase, 528 more specimens being examined than during 1937. Work for the Military and Naval services has also increased.

A reduction in the percentage of adulterated milks is reported but the figure still remains abnormally high.

Most of the work of the laboratories is directly connected with the health of the people.

The report is divided into four parts :—

Part I.—Food and drugs, Public Health Ordinance.

Part II.—Miscellaneous.

Part III.—Bacteriology, chemical pathology and public health work.

Part IV.—Testing of ships for inflammable gas.

PART I.—FOOD AND DRUGS.

“Food and Drugs (adulteration) Ordinance.”

The number of samples taken officially by the sampling officer was 89. The rate of sampling per 1,000 inhabitants was 5.2. Samples received included goat's and cow's milks, tinned milk, ice cream, mineral waters, olive oils various tinned products, general groceries including butter, lard and margarine, wines and spirits and assorted drugs.

Of the thirty-five samples of milk received fourteen were below the statutory limit in either fat, non-fatty solids or both. One sample of sweetened condensed milk was genuine but the

label failed to state that the tin contained the equivalent of (in this case) $1 \frac{4}{5}$ pints of milk. One sample of tincture of iodine had been made from methylated spirit and was also deficient in iodine to the extent of five per cent. In another sample 17 per cent, of iodine was found in excess of B.P. requirements. In all cases of food adulteration where the City Council deemed it advisable legal proceeding were instituted. Nine convictions were obtained. Fines and costs for adulterated samples amounted to £61 9 0. Forty per cent. of the milk samples received were adulterated. Adulteration of milk continues and it would appear that the fines imposed by the magistrates are not a deterrent. A serious view is taken of the high percentage of adulteration of milk in Gibraltar. Attention was drawn to this last year. Five per cent. would be a reasonable figure.

Details of adulterated samples:—

<i>Lab. No.</i>	<i>Sample</i>	<i>Adulteration</i>	<i>Remarks</i>
780	Goat's milk	added water 19.1%	Fined £10 and costs £2 3 0
781	Cow's milk	fat abstracted 3%	No action
783	Goat's milk	fat abstracted 15%	Fined £3 and costs £2 3 0
784	Goat's milk	fat abstracted 14%	Fined £3 and costs £2 3 0
786	Goat's milk	added water 7.9%	Fined £3 and costs £2 3 0
787	Goat's milk	added water 12.7% fat abstracted 14.7%	Fined £3 and costs £2 3 0
1017	Tinct. of iodine	made with methy- lated spirit and iodine deficient 5%	Warned
1020	Tinct. of iodine	excess iodine 17%	Warned
1485	Goat's milk	fat abstracted 17%	Fined £5 and costs £2 3 0
1486	Goat's milk	fat abstracted 30%	Declared skimmed
1784	Goat's milk	added water 2.4% fat abstracted 9.09%	Vendor left Gibralt- tar
1785	Goat's milk	fat abstracted 20%	Declared skimmed
1944	Condensed milk	incorrectly labelled	Warned
2570	Cow's milk	added water 2.5% fat abstracted 17%	Fined £5 and costs £2 4 0
2804	Cow's milk	added water 35%	Informal sample
2881	Goat's milk	added water 14.6% fat abstracted 22.5%	Fined £5 and costs £2 5 0
2882	Goat's milk	added water 14.4% fat abstracted 22.7%	Fined £5 and costs £2 5 0

All three samples of cows' milk were found to be below the statutory limits. All of the samples of imported milk examined showed no evidence of the presence of unboiled milk, and preservative was not found in any sample.

A sample of reconstituted milk taken officially contained fat 3.3 per cent and non-fatty solids 8.8 per cent. The sample had been pasteurised.

The rate of adulteration for all classes of samples was 19 per cent.

Average composition of goats' milk (not adulterated)

	<i>per cent.</i>
Milk-fat	4.38
Non-fatty solids	8.73

The statutory limits for goats' milk are, fat 3.5 % and non-fatty solids 8.0 %.

GROCERIES.

Twenty-nine samples of groceries were examined. These included tea, coffee, chocolate powder, tinned crab, tinned cuttle fish and tunny fish, tinned tomatoes, tinned shrimps, tinned strawberries, apricots, pine apple, pea-flour, butter, margarine lard, olive oil, cheese, sugar and plum jam. Of the edible fats no sample contained more than the statutory amount of 16 per cent of water. The samples of butter, margarine, lard and olive oil were genuine as were the other commodities.

WINES AND SPIRITS.

Samples comprised whisky, brandy, rum, gin and aguardiente. The highest percentage of alcohol found was 36.8 per cent by weight and the lowest was 34.5 per cent alcohol. The average percentage of alcohol for the ten samples examined was 36.4. All samples were genuine and above the statutory limit of 35 degrees U.P.

ICE CREAM.

The two samples examined had the following fat and water content:—

	<i>Milk-fat per cent</i>	<i>Water per cent</i>
No. 1	9.0	52.6
No. 2	9.0	65.6

Conditions attached to the sale of ice cream are that it shall contain not less than 5 per cent of milk-fat and not more than 66 per cent of water.

DRUGS.

The following samples of drugs were received and reported on :—Camphorated oil, epsom salts, eucalyptus oil, boric ointment, zinc ointment, tinct. of iodine, aspirin and mercury ointment. In one sample of tinct. of iodine analysis exposed gross adulteration. This sample had been made with methylated spirit instead of pure alcohol and was also deficient in iodine to the extent of 5 per cent. Another sample had been wrongly dispensed and contained iodine in excess of B.P. requirements to the extent of 17 per cent. All other drugs had been accurately dispensed and were found to be genuine.

FOOD AND DRUG SAMPLES (unofficial)

The following were received chiefly from business houses. Merchants wisely use the laboratory to determine if an article of food or drug complies with the Food and Drugs Ordinance before importation.

- (1) Fresh natural sterilised cows' milk—bacteriological result :—*B. coli*, streptococci and enteritidis change not found in 30 c.c.; fat 3.6%, total solids 12.2%, non-fatty solids 8.6%.
- (2) Bottle of sterilised cows' milk contained fat 3.8%, non-fatty solids 8.71%. In this sample micro organisms were not found in 1 c.c. and it was free from living tubercle bacilli. The milk was found to have been efficiently sterilised.
- (3) A sample of margarine was found to give a marked reaction for rancidity, but in other respects was genuine.
- (4) A sample tin of unsweetened evaporated milk contained milk-fat 9.90%, all milk solids 31.34%. These figures conform to the requirements of Food and Drugs (adulteration) Ordinance but the tin's label failed to state the content equivalent in pints of milk.
- (5) Another sample of sweetened condensed milk contained the equivalent of 1.73 pints of milk as stated on tin's label, but failed to conform to the Ordinance figure of 9.0% milk fat. Sample contained 8.91% milk-fat.
- (6) Sample of "Homogenised" milk was found to be satisfactory both bacteriologically and chemically. Milk-fat was 3.23% and non-fatty solids 8.96%. Preservatives were not detected.

- (7) A sample of granulated sugar was found to be pure cane sugar.
- (8) A sample of cheese contained 28.32% of butter fat.
- (9) A sample of tinct. of iodine conformed to the B.P. standards and contained 2.52 per cent of iodine.

BEER.

Three samples of beer were examined to determine whether samples Nos. 1 and 2 had been adulterated with water. Sample No. 3 was the original brew and was used for comparison.

Analysis:—

	No. 1 suspected per cent	No. 2 suspected per cent	No. 3 original brew per cent
Extract at 102°C.	2.16	2.89	3.36
Extract other than) reducing sugar)	1.84	2.42	2.77
Alcohol	4.15	5.14	4.95
Ash	0.16	0.19	0.20
Sodium chloride	0.014	0.014	0.013
Acidity (as acetic acid)	0.105	0.105	0.111
Reducing sugar	0.32	0.47	0.59

From a comparison of figures obtained for extract, other than reducing sugars. There is strong evidence that sample No. 1 contained at least 30% of extraneous water. This conclusion is based entirely on whether sample No. 3 represents the original brew from which No. 1 was derived. The water added would be rain water. For the same reason sample No. 2 would appear to contain at least 10% of extraneous water. The alcohol content had not been reduced proportionately, but this would be accounted for by subsequent further alcoholic fermentation in this particular sample. This however is thought to be doubtful.

PART II.—MISCELLANEOUS.

Samples examined under this heading are as follows.—

Two samples of canvas in sole of shoes—to determine if damaged by sea or rain water.

Two samples of coal from Electricity Works—for chemical analysis and calorific power.

One sample of torpedo fuel oil—for determination of composition.

One sample of methylated spirit—for identification.

- One sample of tinct. of iodine—to determine if made according to B.P. requirements.
- One sample of “Aquabon”—for chemical composition.
- One sample of tube deposit A.—for chemical composition.
- One sample of tube deposit B.—for chemical composition.
- One sample of drum deposit C.—for chemical composition.
- One sample of white powder found at entrance to outlet of carbon dioxide cylinder—for identification.
- One sample of anti-gas ointment—for estimation of available chlorine.
- One sample of cheese—for analysis.
- One sample of homogenised milk—for bacteriological and chemical analysis.
- One sample of granulated sugar—submitted for examination for purity.
- One sample of tinct. of iodine—to determine iodine content.
- One sample tin of condensed milk—chemical and bacteriological analysis.
- One sample of sweetened condensed milk—for chemical analysis.
- One sample of evaporated milk—for chemical analysis.
- One sample of margarine—for detection of rancidity.
- Two samples of sterilised cows’ milk—for chemical and bacteriological analysis.
- Three samples of beer—examination for adulteration with water.
- Two samples of sterilised milk—for bacteriological and chemical analysis.
- Two samples of chocolate—for evidence of cause of diarrhœa.
- Four cows’ milks—bacteriological for presence of B. paratyphoid B.
- Nine hundred m.l. sterilised glucose saline prepared.
- Two bloods—to determine size of red cells.
- One blood smear—for presence of anthrax.
- One sweat of horse }
One saliva of horse } to detect alkaloid.
- One powder in carrot—for identification of drug.
- One blood smear—for evidence of stripped red cells.
- One sample of coffee }
One sample of milk } evidence of poison.
- One ampoule of liquid—for presence of drug.
- One sample of urine—for detection of lead.

Toxicological and Forensic Examinations.

- (1) Both sweat and saliva of a horse collected on blotting paper, showed evidence of the presence of traces of alkaloid.
- (2) Lead was not detected in the whole of a twenty-four hour specimen of urine of a painter.
- (3) Blood smears showed no strippled red cells as evidence of lead poisoning.
- (4) One-tenth of a grain of morphine hydrochloride was found in an ampoule containing 1 m.l. of water.
- (5) A sample of milk and a sample of prepared coffee contained no poisonous metals or pathogenic bacilli.
- (6) White powder found in a carrot sent by Veterinary Adviser was cafeine citrate.
- (7) Poison was not detected in two samples of chocolate.

PART III.—BACTERIOLOGICAL, PATHOLOGICAL AND PUBLIC HEALTH WORK.

Variety and numbers of specimens which were under this heading are tabulated below:—

	No. of specimens.
Drinking, and other, water	295
Swabs: <i>C. diphtheriæ</i> , Vincent's organisms, &c.	629
Sputa: tubercle bacilli or causative organism	143
Blood:	
Widal—T/H, T/O, paratyphoid, "A" and "B" and <i>Br. melitensis</i>	360
Goats—Widal for undulant fever.....	136
Total count	114
Smears for malaria, anthrax, &c.	16
Culture—enteric, streptococci, &c.	24
Sugar estimations, sugar tolerance test	435
Urea estimations, urea concentration factor	81
Wassermann reaction	841
Sedimentation rate of red cells	2
Van den Bergh and icterus index	8
Naso-pharyngeal swabs for meningococcus...	41
Cerebro-spinal fluid:—cytology, protein, sugar Wassermann and bacteriological.....	75
Pleural fluid: cytology, organisms	15
Urine: analytical and bacteriological exam....	1735
Urine: urea for urea concentration factor ...	70
Pus: gonococci, T.B., or causative organism...	113
Sera: from V.S. for <i>Tr. pallidum</i> (dark ground)	9

Fæces: bacteriological for enteric and dysentery bacilli, occult blood, &c.	206
Breast milk: chemical analysis	34
Rats: examined for plague	118
Histological sections	4
Gastric contents	7
Guineapig inoculations, virulence of K.L.B. and T.B.	22
Autogenous vaccines and stock vaccines	41
Cows' milk, examination for T.B.	44
Calculus	2
Blood grouping	4
Miscellaneous	14
	5,638

DIPHTHERIA AND VINCENT'S ANGINA.

In the examination of swabs for presence of *C. diphtheriæ* only the true Klebs—Loeffler is reported. Hoffmann Bacillus being disregarded. Of the large number of throat swabs bacteriologically examined twenty-three new cases of diphtheriæ were reported. Two nasal swabs were also positive for *C. diphtheriæ*. There were four positive contact swabs. Virulence tests by guineapig inoculation were resorted to when patients persist in carrying the germ in spite of treatment. Of these cultures so tested eight were virulent. Throat swabs of convalescents are repeatedly examined until the absence of the organism is reported in three consecutive swabs. The specific organisms causing "Vincent's throat" were found in 6 cases. All throat swabs where *C. diphtheriæ* is absent are examined for Vincent's organisms.

TUBERCULOSIS.

Various specimens were received for detection of the bacillus causing this disease. They include sputa, cerebro-spinal fluid, pleural fluids, urines, pus, cows' milk, etc. Of the 143 sputa examined 18 (or 12.5%) contained the tubercle bacillus. It was also found in pus from scrotum in two cases, and in one pleural fluid. In suspicious cases of tuberculosis when the bacillus cannot be found in the sputum or urine guineapig inoculation is resorted to. Milk from the several cows living on the "Rock" is regularly tested at intervals for Tubercle bacillus. It was not found during the year.

VENEREAL DISEASES.

The usual examinations of blood and cerebro-spinal fluid by Wassermann and Kahn reactions, sera from primary sores for the presence of *Tr. pallidum* by "dark ground" method, and pus smears for gonococci were undertaken. Of 841 blood specimens 112 reacted positively to the Wasserman test. Gonococcus was found in 19 of the 113 smears examined. Urine sediments obtained by centrifuging were also examined for gonococci in some instances.

MALARIA.

The malaria parasite was found in 6 of the 16 blood smears examined for this infection. They were imported cases.

DYSENTERY.

Many stools were bacteriologically examined for evidence and identification of the type of organisms causing this disease. There was no outbreak of dysentery but the bacillus was found in five isolated cases. Two of these were due to "polyvalent Flexner" and in three others *B. dysenteriae* "Sonne" was isolated. Dysentery due to *B. Shiga* and *amœba histolytica* was not met with during the year. A large proportion of suspected dysentery stools were diarrhœic in character without red blood cells and pus cells. Among the organisms isolated from such stools and suspected of being the cause of the diarrhœa were "Group IV. Medical Research Council" in 3 cases, *B. ambiguus* (Schmitz) in 4 cases, *B. alkalenses* in 2 cases, and *B. Ceylonensis* (strain R.R.) in 2 cases. All dysentery and diarrhœa stools are examined microscopically for the presence of red blood cells and pus cells.

ENTERIC AND UNDULANT FEVER.

All human blood specimens which require agglutination tests were examined for typhoid (H and O) fever; para typhoid (A and B) fever; and undulant fever. Formolised standard suspensions and agglutinating sera obtained from Oxford University are used, and can be relied upon. In one or two non-typhoid cases the suspension of typhoid /O (normal limit 1 in 50) was found to be agglutinated by a dilution of 1 in 100 of patients blood serum. Reason for this has not yet been made clear but it would be explained if the patient had previously suffered from typhoid /O fever, which was doubtful. Of the numerous blood specimens serologically examined 26 new cases agglutinated for either T/H, T/O or both; 9 new cases for para typhoid B. and 6 new cases for undulant fever (*Br. melitensis*). In connection with these diseases stools, blood and urine of

patient and "contacts" were also examined culturally for the presence of the causative organism. Convalescent patients are again examined to ensure he has not become a "carrier" of these germs. Three negative stools being required. Serological tests of blood of those about to be employed in trades dealing with food and drinks were carried out. By this precautionary measure a possible "carrier" of typhoid bacilli would be detected in time. Experiments are being conducted with the new Vi strain of typhoid fever with the hope that its use will materially limit the work in previously inoculated patients.

MENINGITIS.

The results of the examination of 75 cerebro-spinal fluids were reported on during the year. These examinations comprise cytology, protein content, sugar and salt content and for bacteriological evidence of a causative organism. In some instances a Wassermann test is also necessary. Meningococcus was found in 6 fluids, streptococcus in one, and Wassermann was positive in three. Other specimens of C.S.F. showed cytological evidence of tubercular infection though T.B. was not found.

BLOOD EXAMINATIONS, &c.

A variety of examinations comes under this heading and includes renal efficiency tests, blood counts and cultures, sugar tolerance tests and other blood sugar estimations, examination of fractional test meals, cytology, chemical and bacteriological examination of pleural and cerebro-spinal fluids, general urine analysis, estimations of urea and calcium in blood and urine, Van den bergh's test and icterus index in jaundice, rate of sedimentation of red cells, &c., &c.

As a guide and control in insulin treatment, diabetic patients usually visit the laboratory for blood sugar estimation. The total number of blood sugar estimations performed was 435, and two patients attended for complete sugar tolerance tests. In connection with renal disease 54 patients were examined by renal efficiency tests, i.e., for urea concentration factor 38 and for urea concentration test 16. The total number of blood urea estimations performed was 81.

DRINKING WATER

Constant supervision of Gibraltar dietetic waters necessitated the bacteriological examination of numerous samples. The city's public supply is tested monthly each reservoir separately. It remained free from faecal pollution during the year. Military and Navy water tanks annually tested and numbered 117. Many houses collect their private supply of water from roof.

This is stored in underground tanks and these tanks are at times liable to pollution. When contamination is suspected a sample is referred to laboratory. The total number of water examinations carried out was 295.

ANIMAL INNOCULATIONS.

This practice is chiefly confined to the inoculation of *C. diphtheriæ* to determine its virulence and to determine whether sputa, pleural fluids, C.S.F., and urine contain the tubercle bacillus when in suspected cases the presence of the organism cannot be demonstrated by the microscope.

AUTOGENOUS VACCINE.

These are prepared chiefly in cases of eczema, and nasal and bronchial catarrh at the request of medical practitioners for their private patients. Certain stock vaccines are also kept.

NOTIFIABLE DISEASES : VENEREAL DISEASES.

The table below shows the nature and number of specimens examined and the results obtained in connection with the above diseases.

	Total	Positive
Blood—Wassermann	841	112
Blood—Widal		
<i>B. typhosus</i> (H and O)	360	32
<i>B. para typhosus</i> (A and B)		14
<i>B. melitensis</i>		11
Pus—gonococcus	113	19
Sputum—tubercle bacillus	143	18
Swabs— <i>C. diphtheriæ</i>	629	59
Serum (V.S.)— <i>Tr. pallidum</i>	9	1
Cerebro-spinal fluid		
Meningococcus	75	6
Streptococcus		1
Wassermann		3
Blood smears—malaria	16	6
Fæces		
<i>B. dysenteriæ</i> Flexner	206	2
<i>B. dysenteriæ</i> Sonne		3
<i>B. typhosus</i>		2
<i>B. ambiguus</i>		4
<i>B. alkalenses</i>		2
<i>B. Ceylonensis</i> strain R.R.		2
Pleural fluid—tubercle B.	15	1
Goats' blood— <i>Br. melitensis</i>	136	9

GOATS.

All of the goats living on the "Rock" were tested serologically for evidence of undulant fever. For many years past no evidence of this disease was found among the goats, but during 1938 nine goats reacted positively to the agglutination test.

RATS.

One hundred and eighteen of the rats which were trapped on the quayside were examined for plague. All were free.

DISTRIBUTION OF SPECIMENS.

Specimens received during the year were derived as follows:—From Colonial Hospital 1,593; Military Hospital 970; Naval Authorities 228; and from medical practitioners, public health specimens, and samples from the general public 2,985—Total 5,776.

PART IV.—TESTING OF SHIPS.

The City Analyst is responsible for the testing of compartments of oil carrying tankers for inflammable vapours. Gas free certificates are necessary before ships of this class enter dry dock for repairs. Three tankers were examined.

(Sd.) A. GEO. HOLBOROW, F.I.C.,
City Analyst and Bacteriologist.

REPORT OF THE GOVERNMENT VETERINARY SURGEON 1938

CONTAGIOUS DISEASE.

During the year the only contagious disease which occurred amongst cattle in Gibraltar was a mild outbreak of Foot and Mouth disease affecting imported slaughter cattle.

The first cases were diagnosed on 24th February in some bulls from Morocco which were housed at the Cattle Sheds at the Government Abbatoir.

From this date onwards a careful inspection was made at the quay of all slaughter animals imported and cases continued to occur up to 11th August, 1938. During this period—February to August—the actual number of animals affected was.—

Cattle 134 : Pigs 2.

None of the sheep which were carried in the same ships as the cattle contracted the disease.

The heads, paunches and feet of all the affected cattle were burnt, whilst in the case of the pigs, as there were no lesions in the mouth only the feet and paunches were condemned. No affected animals were allowed to walk from the quay to the Cattle Sheds and during the outbreak no slaughter animals were allowed to be housed in private cattle sheds. The disease was thus confined to the Cattle Sheds at the Government Abbatoir and no local animals contracted the disease.

SWINE FEVER.

One case of this disease occurred on 11th December, 1938 in a pig housed in the pig sheds at the Government Abbatoir. After the diagnosis had been confirmed by post-mortem examination, the carcase was burnt; all incontacts were slaughtered and the piggery thoroughly disinfected. No further cases occurred.

SLAUGHTER CATTLE, SHEEP AND PIGS.

(a) *Imported.*

Cattle 2,192	}	From Morocco.
Sheep 1,056		
Pigs 683		

Two bulls had to be slaughtered on the quayside owing to injury in transit. On the whole the condition of the cattle and sheep was good with the exception of a few months in the year when there was a shortage of grazing in Morocco during which the animals arrived in poorish condition.

The pigs imported during the past year have, generally speaking, been in excellent condition.

In the past, cattle on disembarkation at the quay were allowed to roam about and were not only a danger to the public, but made the roads adjoining Waterport Custom House in a filthy condition.

A cattle pen has recently been erected by the Crown Surveyor and Engineer in which the animals can be kept until they have passed a Veterinary examination. Although the pen, owing to lack of space, had to be made much smaller than the plans I submitted, it answers the purpose and is a great convenience.

The cattle and pig sheds at the Government Abbatoir are satisfactory and kept in a sanitary condition. The accommodation for sheep is very limited and does not permit of newly arrived consignments of sheep being kept separate from those already in the sheep enclosure.

(b) *Exported.*

Twenty-seven cattle for slaughter	(to shipping)
One pig	„ „ (to shipping)

SLAUGHTERING.

The method of slaughtering pigs as practised in Gibraltar, i.e., “sticking” them and leaving them to bleed to death, is in my opinion unsatisfactory. During the past five or six years most of the up to date bacon factories and Municipal Abbatoirs in England and Scotland have adopted some method of rendering the pigs unconscious before “sticking” them. The usual method is to use an electric “stunner.”

I have discussed this question with the M.O.H. and I am now in correspondence with an expert in England regarding the various types of electric “stunners” and captive bolt pistols used in slaughter houses, and when I am satisfied as to the best type of apparatus I will bring the matter again to the notice of the M.O.H.

HORSES.

No cases of contagious and infectious disease amongst horses in Gibraltar have come to my notice, except a mild outbreak of nasal catarrh and strangles affecting ten animals.

Two cases of tetanus occurred, one of which died. The other responded to anti-tetanic serum.

IMPORTS :—

From Casablanca	12
„ Spain	9
„ England	8
„ Tangier	4

EXPORTS :—

To Tangier	8
„ England	7

DOGS.

Two cases of rabies occurred during the year and the diagnosis was confirmed by the Pasteur Institute, Tangier. One of the dogs affected was found near the barrier at Four Corners and had undoubtedly come in from La Linea. It was conveyed by the G.S.P.C.A. Inspector to the Segregation Kennels at Rosia.

All the above cases were diagnosed in the early stages of the disease and isolated before they had bitten anyone. The owner of one of the dogs and several other people who had been in contact with it received anti-rabic treatment. These occasional cases of rabies occurring in Gibraltar from time to time show how necessary it is that all dogs should be muzzled.

DOGS AND CATS IMPORTED.

From England	17 dogs
.. Roumania	1 dog
„ Malta	2 dogs and 2 cats.
„ Spain	2 dogs
„ Singapore	1 dog

DOGS, CATS AND MONKEYS EXPORTED.

To England	3 dogs and 1 cat.
„ Dakar (Senegal)	2 dogs, 1 cat and 1 monkey.
„ Roumania	1 dog
„ Switzerland	1 dog
„ Tangier	1 dog

The Government Segregation Kennels at Rosia were taken into use on 5th May when the old kennels near the market were demolished.

The number of dogs and cats that underwent quarantine for six months or less:—

Dogs 6 : Cats 2.

The number of dogs and cats detained after biting or scratching human beings :—

Dogs 27 : Cats 5.

The number of stray dogs and cats detained :—

Dogs 22 : Cats 7.

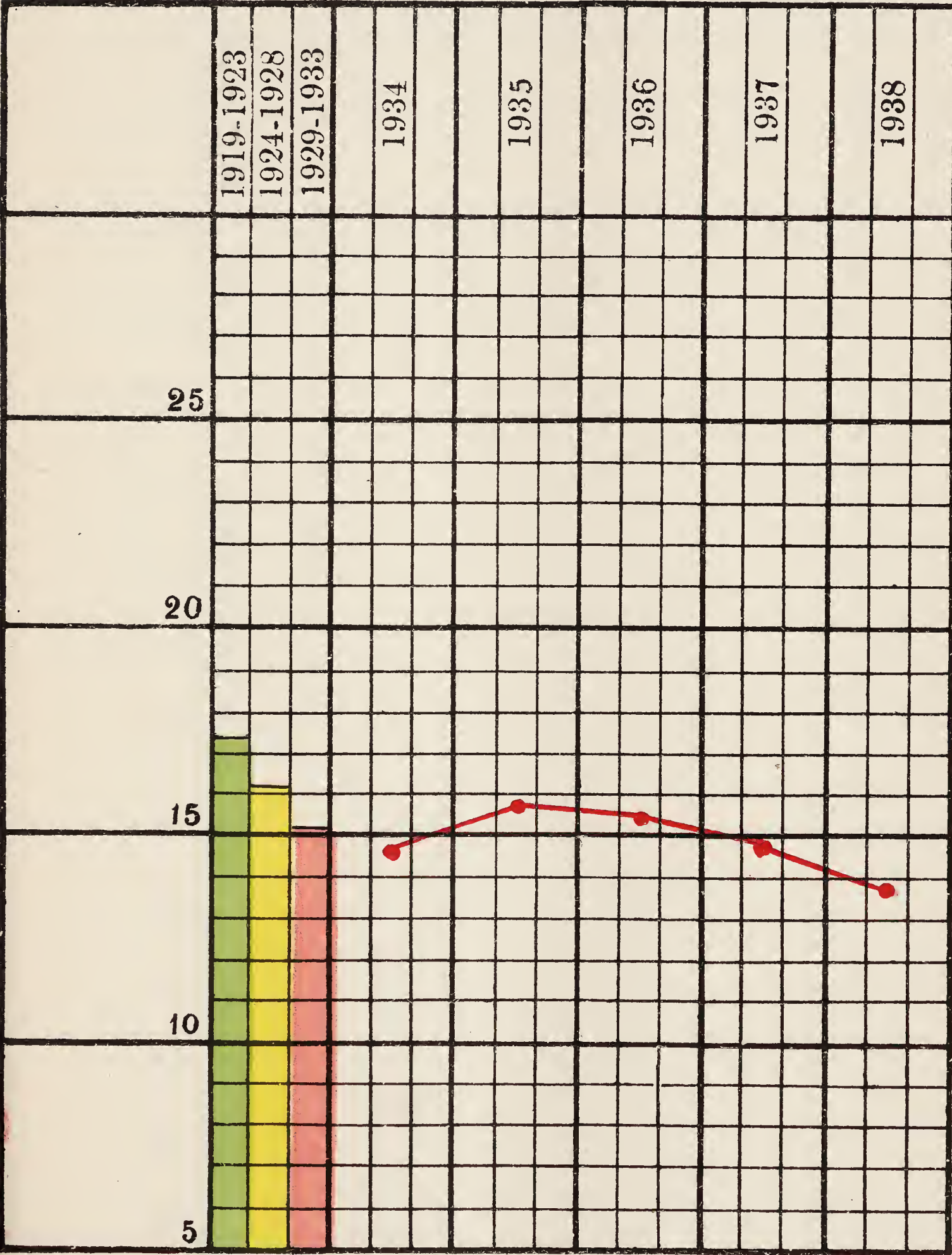
The number of unclaimed dogs and cats destroyed :—

Dogs 23 : Cats 42.

The number of injured or unwanted dogs and cats destroyed by the G.S.P.C.A. :—

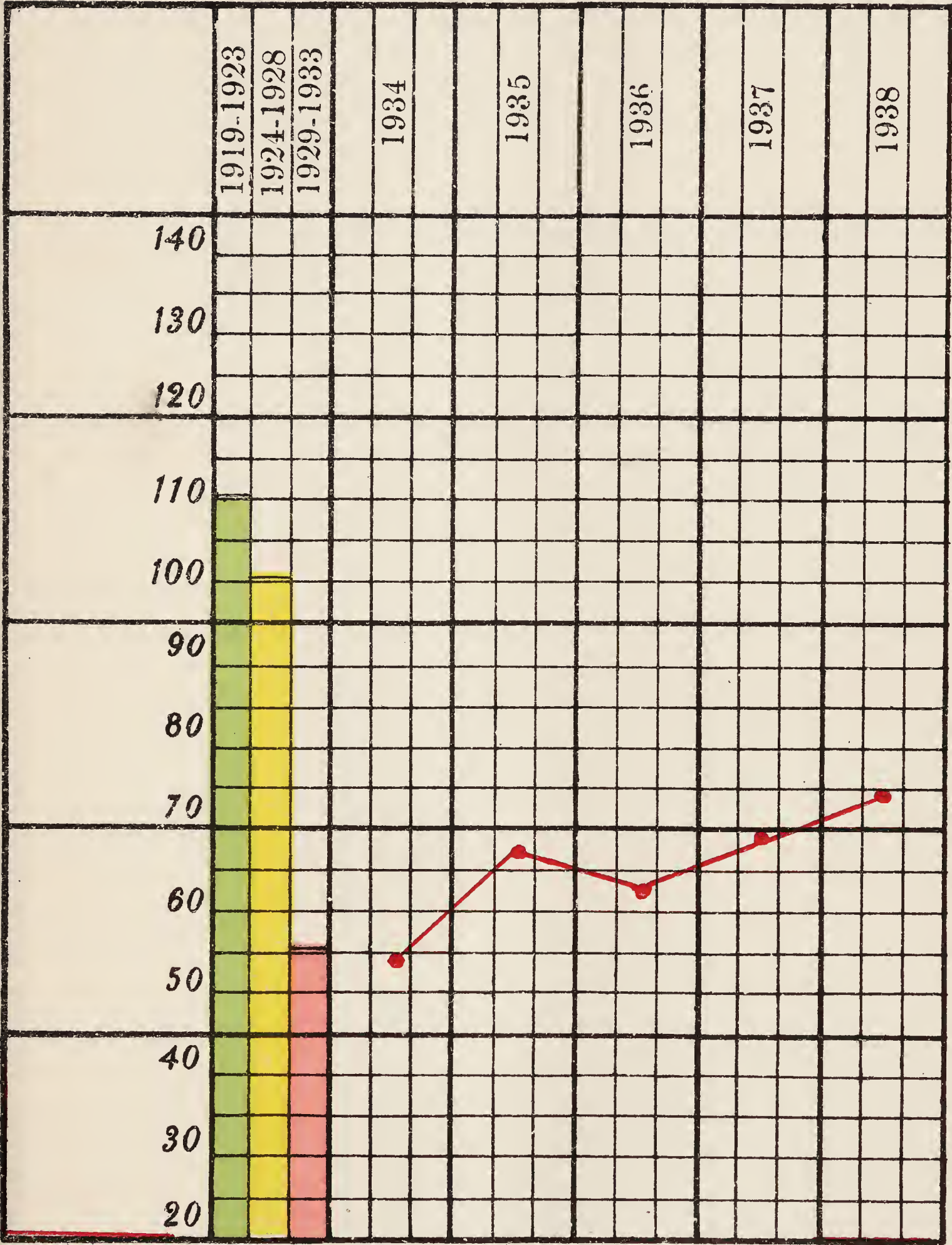
Dogs 78 : Cats 226.

General Death Rate per 1,000 of Population (Total Civil)
 Gibraltar, for the Decennial Periods
 1919-1928 and 1929-1938



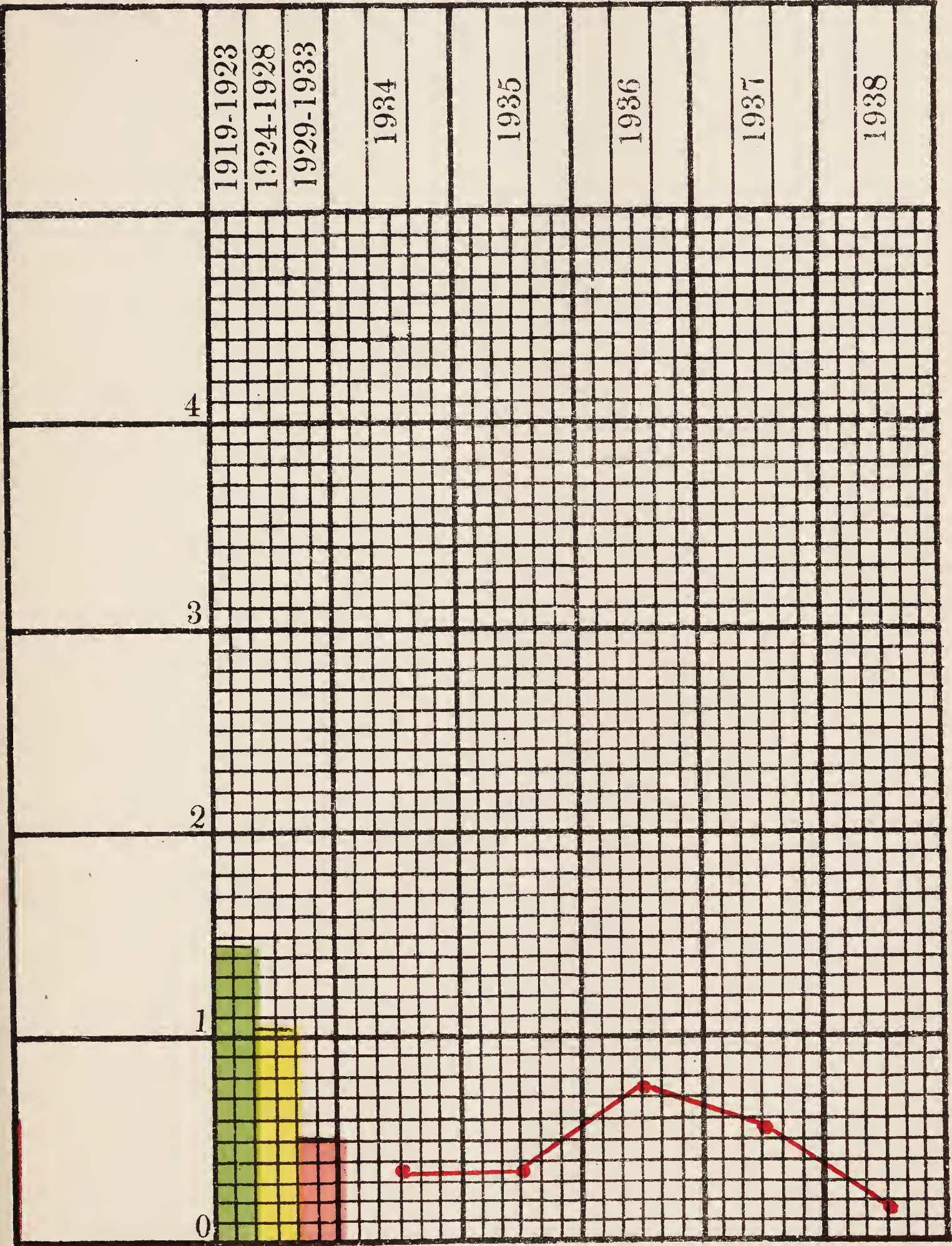
Average {	1919-1923	....	17.33	1929-1933	....	15.02
	1924-1928	....	<u>16.04</u>	1934-1938	....	<u>14.87</u>
	<u>1919-1928</u>	....	<u>16.68</u>	<u>1929-1938</u>	....	<u>14.94</u>

Infantile Mortality per 1,000 Births, Gibraltar,
for the Decennial Periods
1919-1928 and 1929-1938



Average {	1919-1923	....	110.1	1929-1933	....	55.7
	1924-1928	....	<u>100.6</u>	1934-1938	....	65.3
	<u>1919-1928</u>	....	<u>105.3</u>	<u>1929-1938</u>	....	<u>60.5</u>

Zymotic Mortality per 1,000 of Total Civil Population,
 Gibraltar, for the Decennial Periods
 1919-1928 and 1929-1938



Average	{	1919-1923	....	1.49	1929-1933	....	.50
		1924-1928	....	<u>1.05</u>	1934-1938	....	<u>.43</u>
		<u>1919-1928</u>	....	<u>1.27</u>	<u>1929-1938</u>	....	<u>.47</u>

